ABSTRACT

Separation and Identification of Secondary Metabolites of *Streptomyces* sp. (K6) in Methanol – Butanol Extract with Thin Layer Chromatography – Densitometry

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Streptomyces sp. is an important microbe in pharmaceutical production. Many antibiotics isolated from this species. Streptomyces sp. K6 is one strain of Streptomyces isolated from soil in kale plantation located in Sidoarjo – East Java – Indonesia. *Streptomyces sp*. K6 is potent isolate among 15 Streptomyces isolate which has antibacterial activity. This strain is effective against *Candida albicans, Staphylococus aureus, Pseudomonas aeruginosa,* and *Escheria coli*. *Streptomyces sp*. K6 was identified as one strain of *Streptomyces antibioticus* based on morphological and biochemical properties. The previous research identified and separated the metabolite of *Streptomyces sp.* K6 in methanol – butanol extract with thin layer chromatography, obtained 2 spot. Both spots have antibacterial activity. But, the two spots were not completely separated. Using high performance thin layer chromatography (HPTLC) plate impregnated in 0,1M potassium hidroxide (KOH) and methanol : water (1 : 1, v/v) as the mobile phase, obtained a better spot separation. The two spots separated with Rs of 1,27 and have the Rf of 0.812 and 0.725, respectively. The spots were scanned with densitometer to obtain the proportion of the two spots of metabolites. Result showed that the more polar compounds have larger areas than less polar compounds.

Keywords: *Streptomyces sp*. K6, thin layer chromatography, high performance thin layer chromatography, densitometry, impregnation.